TEMAC Tribune

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MACINTOSH NEWS

IN BRIEF

Few people realize that you can copy and paste to and from the Calculator with the same standard techniques you use with other Mac applications. If you're dealing with a complex calculation within a word processor that doesn't do math, perform the calculation in the Calculator and paste the result into your document.

"I Didn't Know That!" Q&A from Apple Computer

Ask an Apple dealer what are some of the most asked questions customers have and he'll probably respond, "Have you got a week?"

But the people at Apple headquarters in Cupertino, who know not only all the questions but all the answers, have come together and written a list of their top questions. We call simply, Q&A.....

Q: How can I expand the memory in my Mac II? Is it okay to use third-party SIMMs?

A: We recommend the Mac II 1Mb, 2Mb, and 4Mb Memory Expansion Kits. These kits and information on memory expansion for the Mac II are available from your authorized dealer. Although we don't specify the technical requirements of third-party SIMMs (single in-line memory modules), many suppliers have obtained Apple's specifications and designed their chips according to our systems requirements. Although installing third-party SIMMs won't void your Apple Warranty, please keep in mind that third-party SIMM failures are not covered by the Apple 90-day limited warranty or Apple*Care*.

Q: How important is it that I Shut Down instead of just turning off my Mac?

A: It is critically important. When you choose Shut Down or Restart from the Special menu, Macintosh updates the status of files and does some general housekeeping before you turn it off. If you turn it off without first choosing Shut Down, you could lose data or damage your hard disk.

Q: I have a 1Mb Mac system. Why do I run out of memory if I use HyperCard while running MultiFinder?

A: HyperCard can run on a 1Mb Mac system, but only with MultiFinder turned off. Even then, you may not have access to all of the HyperCard tools all of the time. For example, you can create a card on a 2Mb machine that you cannot open on a 1Mb machine. Also, HyperCard keeps track of new stacks and/or cards as they are opened. In time, this could use up enough memory to prevent the use of the painting tools. To conserve memory, open only one stack at a time and don't switch to other stacks unnecessarily, compact stacks often, and don't use complex graphics on a 1Mb machine. It may be necessary to quit to the Finder regularly and then open HyperCard again during the session.

Q: I've heard about Macintosh System Software Version 6.0.3. What's new about it and how do I know if I need it?

A: Mac System Software Version 6.0.3, is a minor revision to support the Mac SE/30 and Mac IIcx. It also includes an updated version of Apple File Exchange, a program that lets you transfer files between Macintosh computers and MS-DOS or ProDOS computers. If you don't use Apple File Exchange and don't have a Mac SE/30 or a Mac IIcx, you don't need to update your system software to 6.0.3. If your Macintosh is part of a network and you need to update your system software to 6.0.3, the other computers on the network need to be running either Version 6.0.2 or 6.0.3.

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Q&A Continued from Page 2

Q: After installing Macintosh System Software Version 6.0.2 on my Macintosh II, I was ready to try background printing to the LaserWriter. I opened the Chooser, but the background printing option wasn't there. How can I get background printing?

A: Background printing is only available when you're using MultiFinder. When MultiFinder is on, a small icon appears in the far right corner of the menu bar. To turn MultiFinder on, choose Set Startup from the Special menu, click the MultiFinder button, and restart your Macintosh. Look in the System folder on your startup disk. If you don't see an icon called Backgrounder, you may have installed the system software incorrectly. Use the installer program on your Macintosh System Tools disk to reinstall system software on your startup disks. (Follow the instructions in the *Macintosh System Software User's Guide.*) When the installation is finished, quit the Installer and check for the Backgrounder icon in the System Folder you updated. You should now be able to open the Chooser and turn on background printing. MultiFinder also allows you to have several applications open at once. You can move information quickly between one application and another, or the computer can perform calculations, recieve information over the phone, or print documents in the background without interrupting your work.

Mac News

Guy Kawasaki, The well-known former Apple executive who helped to launch the original Macintosh, has left database vendor ACIUS, which he founded in 1987. In a message posted in the company's on-line support forum on CompuServe, Kawasaki said he will leave the company in December. He gave no details of his future plans, which has left Silicon Valley in a state of wonder and rumor as to what Kawasaki will do next.

The 7.1 Richter San Francisco earthquake was a shocker, but for the most part, caused little damage to Apple computer facilties in Cupertino. Although Apple buildings remained closed the day after the quake, business returned to normal the next day after inspection of the structures. On a sad note, two editors of MacUser Magazine were killed after leaving a meeting at the San Francisco offices of MicroMind. Police say their car was crushed by a falling building.

The release date for HyperCard 2.0 has slipped to spring at the earliest, but progress continues. Beta testing was to begin in September, but alpha testing is only just beginning this month. Features expected in HyperCard 2.0 include standard, resizable Mac windows; multiple and styled fonts eithin text fields; as many as 50 new HyperTalk commands; a built-in incremental compiler that will run in the background; and external commands and functions (XCMDs and XFCNs) running in the main event loop, making them faster and more flexible. The good news? It will be fast. The bad news? Unlike its competitors, no color.

Has all the pressure and bad publicity regarding Apple's 90 day warranty from MacUser and MacWorld paid off? Apple will never admit it, but it's truly possible. MacWeek magazine reports that Apple executives are re-evaluating the current warranty period, which has recieved consumer criticism as not being long enough. Apple has not given any indication as to when a decision will be forthcoming. A longer warranty, already offered to the international market, is expected to cover the Apple II and Macintosh line of computers.

With two new Mac computers (the Portable and IIci) just released, it's time for fresh rumors of Apples' next "baby". The lastest word? The supercharged Mac IIcx, or what many call the "F-19" to be introduced in the spring of 1990. If you thought the IIci was fast, just wait for this "screamer"! Sporting a 33 to 40Mhz 68030 CPU, six Nu-Bus slots and a cache card connector, the IIxi will 30 to 100 percent faster than the already speedy IIci! In keeping with the project's original code name and Apple's desire to get a larger piece of the federal governments pie, plans are in the works for a splashy product introduction at the Smithsonian Air & Space Museum. And the price? $10,000 to $12,000. "How many IIGSs could I buy for that?"

How good is Adobe's new Type Manager? The approx. 250 beta testers say it is well worth the $99 price tag. ATM solves one of the largest problems for Mac users.....jagged text and graphics on screen, making it difficult to read. ATM will smooth corners, making the adage, "What-you-see-is-what-you-get" even more true. A review next month.

WELCOME TO OUR NEW MEMBERS!!

ROBERT LUCAS
NATHAN REYNOLDS
DAVID WILSON
ZACH HAWK
FRANK HOOPES
RICHARD McFARLAND
JAN LEE
JOHN LAUTNER

APPLE II NEWS

IN BRIEF

Having trouble booting your system with Control-Open Apple-Reset? Keystroke timing is critical: 1) While holding down the Open Apple and Control keys, press and release the Reset key. 2) Release the Open Apple and Control keys AFTER you have released the Reset keys.

PRODOS and BASIC SYSTEM for the Beginner - Part 1

By Ray McCaffity - Member of TEMAC Board of Directors

The title of this column says "for the Beginner" but some of you old timers may find out something you didn't know before. I have been asked several questions by members of TEMAC concerning ProDOS and BASIC.SYSTEM. I've wondered how many more of you have questions, but didn't know who or what to ask. A lot of these questions came from people who are obviously used to DOS 3.3. Well maybe, just maybe I can help. The scope of this column will only cover ProDOS.8 for the time being, ProDOS.16 is a whole different ballgame.

"How can I FORMAT a disk with ProDOS? I tried using the INIT command and I got a SYNTAX ERROR. What can I do?" ProDOS BASIC.SYSTEM doesn't support the INIT command, in fact it doesn't even support formatting!! The code to format a blank disk in ProDOS doesn't exist in BASIC.SYSTEM. You must have a SYSTEM.DISK or utility program such as COPY][Plus or DigiCopy. There is NO way to Format a ProDOS disk from BASIC. (From now on when I say BASIC I am talking about ProDOS BASIC.SYSTEM) If you don't have a SYSTEM.DISK, I'm sure you can get one from Freddie.

"I've formatted a ProDOS disk with my SYSTEM.DISK but it won't boot. I keep getting the message 'NOT A STARTUP DISK' or 'DISK DOES NOT CONTAIN ProDOS', what am I doing wrong?" Unlike DOS 3.3 when you FORMAT a disk with ProDOS the DOS (Disk Operating System) isn't automatically put onto the disk. After you FORMAT a blank ProDOS disk, you must then put the file 'PRODOS' on the disk. This should be the first file on the disk (although it doesn't have to be). ProDOS FORMATs disks two different ways, as a Program Disk or as a DATA disk. AppleWorks, for example formats disks as DATA disks, this saves you a whopping 3 blocks of disk space (1.5K). If you are going to use the disk strictly as a DATA disk you do not have to put the PRODOS file on it. If you are using a utility such as Copy][Plus, you will not be able to format as a DATA disk, but that's O.K. because a Program disk will hold DATA just as good, you will only lose 3 blocks of space on your disk; however, you cannot use a disk formatted as a DATA disk as a StartUp disk even if ProDOS and BASIC.SYSTEM are on it. After you put 'ProDOS' on your new disk, you must also put a .SYSTEM file on it; Such as APLWORKS.SYSTEM or BASIC.SYSTEM. ProDOS by itself is no good, so it automatically looks for a SYSTEM file any time it is booted. If you want to use BASIC, you must have the BASIC.SYSTEM file on the disk (this is usually the second file). The problem with ProDOS and BASIC.SYSTEM is that together, they take up 51 blocks of disk space (approximately 25K).

A 5.25" disk holds 140K of memory or 280 blocks of space (notice that 280 divided by 2 equals 140) The ProDOS FORMAT takes up 7 blocks, ProDOS takes up 32 blocks, and BASIC.SYSTEM takes up 21 blocks, and we still don't have any programs on the disk!!!

O.K. then why should I use ProDOS? The main reason is because Apple Computers Inc doesn't support DOS 3.3 anymore. It's getting harder to find a DOS 3.3 system/ utilities disk. Also ProDOS is approximately 6 times faster accessing disk information.

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AppleWorks GS Upgrade Announced

Claris Corp. has announced AppleWorks GS 1.1 which incorporates major speed enhancements and provides better compatibility with Apple IIGS hardware and System 5.0. The new version will ship in November.

When used with System 5.0, AppleWorks GS 1.1 offers overall performance improvements that load the program eight times faster than the previous version running under System 4.0. The upgrade also offers enhanced screen updating to allow users to scroll more quickly through documents, faster spreadsheet recalculations and direct importation of AppleWorks 3.0 files.

"This new version of AppleWorks GS demonstrates Claris' continued commitment to our customers," said Bill Campbell, Claris president and CEO. "With AppleWorks GS 1.1 we've not only addressed the performance and compatibility issues that our customers have asked for, but we've also added many features to make it a more robust, fully-featured product."

Additional feaures include a memory test utility that allow users to test their memory expansion board before using the program, a database conversion utility for converting previous database files for use with AWGS 1.1, a database template designed especially for creating 1-inch mailing labels, special palettes that improve the quality of imported color graphics and "Contains", "Begins" and "Ends" functions that have been added to the database and spreadsheet modules.

A new graphics Control Panel eases access to many routine tasks, such as choosing a printer. Users can also create accents and diacritical marks used in foreign languages as well as a variety of special characters.

AWGS 1.1 will have a suggested retail price of $299 which includes the new GSOS 5.0. Registered AWGS 1.0 users can purchase an upgrade directly from Claris for $29.00 by requesting an order form from their customer upgrade number. Call 1-800-544-8554.

Editors Suggestion.....call as soon as possible. When word gets out to everyone, Claris will start getting backlogged with orders.

"When does my TEMAC membership expire?"

The mailing label on your newsletter tells you the month and year your membership runs out. Come to a TEMAC meeting or call Janis Meacham at 855-4464 for details on how to renew.

"Knife" says IIGS Future Looks Bright

Good news for Apple IIGS owners. Following reprinted from 10/31/89 **MacWEEK** magazines "Mac The Knife" column:

"Anyone who thinks Apple is about to give up on the Apple IIGS should think again. The knife has learned Apple is pulling out all the stops to get a IIGS version of HyperCard in the stores by March, 1990. The design aim is rumored to be compatible with HyperCard 2.0 stacks (for the Mac), although the whispers in the hallways in Cupertino indicate that there are several obstacles to be overcome before this goal is reached. Further evidence of Apple's commitment to the IIGS line is an upcoming new SCSI card that will allow for faster hard disks. Probably the only thing that could foil Apple's plans is its own low-cost replacement for the MacPlus and the SE."

So, good news for all IIGS owners. Or at least it seems that way.

New...for the Apple II

Apple Computer has increased the RAM and ROM on the Apple IIgs. All new Apple IIgs's will now come with 1Mb of RAM and 256k in ROM. This is twice the amount currently found in the Apple IIgs. There have also been improvements made to the logic board which will give better sound. No upgrade is available from Apple for current owners.

Addison-Wesley has a new educational site license policy for its Wordbench word processor. The Educator License entitiles a teacher or lab coordinator to make as many copies of Wordbench as necessary for use in one classroom or lab. There is no cost for this license and guarantees program updates and revisions free of charge for six months. To obtain this license, contact Jane Tamlyn at Addison-Wesley's Consumer Software Department, Rt. 128, Reading MA 01867 or call 617-944-3700, ext 2626.

Cirtech is reportedly working on an internal hard drive that fits in a slot and includes a SCSI port. The company also has a new fan available for the IIgs. Cool-It takes 2 minutes to install and is powered by Apple's power supply. It will retail for $49.00.

Chinook has some new products for the Apple IIc family. CT-40c is a 40 megabyte hard disk drive for the Apple IIc and IIc+. The drive connects to the SmartPort or a UniDisk controller in a IIe. The drive comes with cables, program selector and partitioning software. Also announced was a RAM memory expansion kit for the IIc and IIc+.

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ProDOS can access up to 8 megabytes of memory (ProDOS.16 can access 16 megabytes, and GS/OS up to 32 megabytes), where as DOS 3.3 can only access up to 140K of memory. GS/OS and ProDOS.16 can read ProDOS disks, but they can't read DOS 3.3. ProDOS has many new built in commands, that DOS 3.3 doesn't have, although DOS 3.3 had a few commands ProDOS doesn't, such as INIT, MON, and NOMON.

The main difference between DOS 3.3 and ProDOS is the use of subdirectories (sort of like chapters in a book). Although ProDOS and DOS 3.3 are very different, AppleSoft and BASIC.SYSTEM are almost identical. In fact the only changes in BASIC programming you will have to make, are where the ROM hardware interfaces are concerned (unless you are a fairly advanced programmer, you probably won't know what that is). Many programs written under DOS 3.3 can be converted to ProDOS with a conversion utility (like Copy][Plus) and run just fine. The exceptions being those programs which use Double Hi-Res graphics, and those used to control hardware (such as the printer).

I mentioned before, that 280 blocks are equal to 140K, (perhaps some of you 3.5" disk users have noticed that there are 1600 blocks on a 800K disk) this is nice to know because it tells you size of your program. A typical directory looks like this...

/MY.DISK/

	blocks	type	time	date
PRODOS	32	SYS	11:00	09/15/88
BASIC.SYSTEM	21	SYS	2:35	11/12/88
MY.PROGRAM	10	BAS	12:07	12/05/88

blocks 280 70 Used 210 free

To find the size of your program you simply divide by 2, for example 'PRODOS' is 16K. Now, you may be wondering why 70 blocks are used, 32 + 21 + 10 doesn't equal 70. This is because the ProDOS FORMAT uses 7 blocks. Now you see 32 + 21 + 10 + 7 = 70. This means that you've used up 35K of 140K. Simple huh? Don't worry about it, you'll get used to it.

DOS 3.3 could only access up to 140K of memory at one time. This was O.K. for 5.25" disks, because that's all they hold. Unfortunately you can't use DOS 3.3 with 800K disks.

In DOS 3.3 you had to type 'CATALOG' to view a directory, you can also type 'CATALOG' with ProDOS but you don't have to, you can just type 'CAT'.

In fact if you are going to use 'CATALOG' you should be in the 80 column mode, this makes things much easier to read. 'CATALOG' gives you a little more information than 'CAT', such as the file length, the beginning address of the file, and the date the file was last modified. The 'CAT' command works just fine in 40 column mode. For those of you that don't know how to go back and forth between 40 and 80 column modes, this is the secret of life. Type...

```
PR#3                (to go into 80 column mode)
```

and type....

```
PRINT CHR$(21)      (to go back to 40 columns)
```

Unless your computer has at least 128K or an 80 column card, you won't be able to use the 80 column mode. If you are using a television as a monitor 80 columns may be difficult to read. If you have a IIGS you can press the 'esc' key and then press either '4' or '8', to change back and forth (I'm not sure if this works on a IIe or IIc).

That's it for this time, next time we'll talk about filetypes and their uses. How to make your program boot automatically, some more on hardware control and I'll also try to fit in a few BASIC commands. If you have any problems give me a call at 696-5460, or leave me E-mail on the TEMAC BBS.

Anyone wanting to learn BASIC should give Freddie or me a call. If we get enough people interested maybe we can start a BASIC SIG. It's easier than you think!

Bits & Bytes

As you read this, another Computer Learning Month has passed successfully and once again, TEMAC did its share. On October 21st, we held a presentation at the Kemp Public Library for Computer Learning Month. Using a Mac SE and Apple IIgs, we demonstrated several software packages used for education. The turnout was very good, although, several kids became addicted to Phraze Craze (on the Mac SE) and Bounce It! (on the IIgs).

You can do your share for Computer Learning Month, by helping educate children, staff, parents and friends. Let's use the computer for the valuable tool it is.

II FOREVER? - It has come to my attention, that a few of our members have doubts as to the future of the Apple II family. These thoughts seem to come mainly from IBM and Macintosh folks. I have no reason to doubt Apple's insistence that the Apple II family is a vital part of Apple's future. While statements from other industry pundits and a few folks in Apple, common sense seems to rule here. What person, or in this case, company; would abandon a part of their organization that generates millions of dollars a year?

II FOREVER? PART 2 - These feelings have led to the misconception that, TEMAC is becoming more and more pro-Mac. While the majority of the articles seem to be Macintosh and Apple IIgs oriented, we have not forgotten about the other members of the Apple family. We have just forgotten to write about them. This will change in the immediate future with more articles for the Apple II family as well as more pubic domain programs.

Freddie Cooper, President

GENERAL NEWS

Software Piracy... A Different Angle

By Richard D. Mulligan

The doorbell rang at 8 pm; it was a good friend. He invited his friend in and showed him the latest in a series of Fantasy role-playing games from a major game publisher; he'd bought it that day for $49. "Wow, that looks great!" said the friend.

"No problem," said the host. "I'll run you off a copy to take home with you before you leave."

A hidden group exists in the USA today; it's language is bizarre and arcane, it's members secretive. They are engaged in an illegal activity. They are game software pirates, and their reach extends to every corner of this country, for just about every owner of a home computer does it.

"Casual piracy" may be costing the game industry as much as $50 million dollars or more a year in lost sales, yet there seems to be no way to stop it without totally redefining just what "software piracy" really is, or so totally copy protecting game disks that you'll never be able to put a game on your hard drive again.

If you've ever made a copy of a game for a friend and given it to him, you're a casual pirate. If you've ever received a copy of game from a friend, you're a casual pirate. If you've ever made a copy of a game, then sold it, the FBI would like to speak with you.

"ROUND UP THE USUAL SUSPECTS..."

The call came at the usual time, 8 pm; the SysOp left the terminal, where he was updating download files on his BBS, and picked up the receiver.

"It's me," the voice on the other end said. "I've got the latest cracked version of that RPG we talked about last week."

"Great!" the SysOp replied. "That must be a new record for you; it's only been out for 2 days. "I didn't have to crack this one," the other said. "It's a Beta Test version; I bought it at a swap meet in San Francisco for ten dollars."

The SysOp laughed. "That's excellent! Ok, you upload the RPG, and I'll give you access to war games library. Someone just cracked the newest Midway game and uploaded it there."

The tools of the software pirate are few; a home computer, a copying program and a spare disk. With these, even a novice computer owner can copy today's most expensive game programs and give a copy to a friend.

The other side of that coin is the "professional," the knowledgeable computer user who, with the aid of some specialized programming utilities, can "crack" the copy protection on a game in days, sometimes hours. When he's done, he can upload the unprotected disk to any compatible computer with a modem. Suddenly, a game that might cost $50 retail is being acquired for little or no money by dozens or, sometimes, hundreds of computer owners.

It isn't "big business," in the sense that pirates are making a profit; the "casual" pirate

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never charges his friends for a copy of a new game, and very few "pro" pirates sell the software they crack. Almost all, though, put their pseudonyms, on the title screen of every piece of software they de-protect. They gain stature in the closed community of "crackers;" their friends and associates gain hundreds of dollars of software at no cost.

However, even casual piracy effects the end consumer; hundreds of thousands, perhaps millions, of dollars in sales are lost to publishers each year due to piracy, casual or otherwise. Money that could have gone to producing more or better games never comes in. As well, publishers price their products by how many copies they expect to sell; if everybody who owned a copy of, for example, Chuck Yeager's Flight Simulator, one of the most popular programs around, had bought that game off the shelf, it might cost half of what it retails for today.

When I started this article, I figured I'd have about one hundred comments from publishers on the evils of software piracy, and no comments from professional pirates; I've never been more wrong.

Many people at the major game software publishers were willing only to make a grudging comment on the current state of software piracy, IF their name wasn't used or the name of the company they work for referred to. Mostly, they just didn't want to talk about it, or weren't authorized to give out information on the subject. The exceptions were Mediagenics/Activision and Garde/Games of Excellence.

On the other hand, the software pirates and the System Operators (SysOps) who run pirate computer Bulliten Board Systems (BBS), wouldn't shut up. I had to convince one of them NOT to reveal his true name; the chance of going to jail just didn't seem to deter him at all. Considering the laxity of software theft laws in most states, I could hardly blame him.

The real shocker was the attitude of some of my friends and associates; they all know piracy is wrong, and yet each and every one of them had at least one piece of commercial software that they hadn't paid for.

BACKGROUND: THE HACKER ETHIC

Piracy is a term coined in the late Seventies, defined as "illegally disseminating software or software products copyrighted by another individual or organization." In it's baldest definition, piracy is the theft of a game or other software, most often by a private individual. This person will then give or sell the program to others, depriving the designer and publisher of the price of the program.

"Casual" piracy, or individual acts of copying and distributing of software, grew out the fabled "hacker" mentality, originally fostered at MIT in the late 1950's and early '60s, by a group of precocious student programmers working on old batch processing machines. These hackers would leave their tapes in a drawer for anyone to use and improve on, the object being to get the best program using the smallest number of computer command codes. Sometimes dozens of students would "hack" at the same program; he who developed the tightest code was a true star, held in deep respect by other students.

As these students graduated and moved out into the world they took this "hacker ethic" with them. It was seen as the opportunity to fulfill a grand dream; a totally open society, with completely free exchange of information via computers. This attitude caught on among home computer buffs in the Seventies; groups like the famous Home Brew Computer club in the San Francisco Bay Area were used to a totally free exchange of ideas, discoveries and theories among themselves and other clubs, and this helped spark the computer revolution in 1978. The two "Steves," Jobs and Wozniak of Apple Computer fame, were members of the Home Brew organization.

The hacker ethic didn't start eroding until software and hardware designers realized how much money there was to be made in the home computer industry; suddenly, the words "public domain" became verboten, and the pioneers rushed to get copyrights and patents registered.

What was left after this shakeout was a small group of people who still clung to the hacker ethic of free information, freely distributed. Their passion has seen its own explosion, in the form of privately owned and operated computer BBSs. Using a computer and a device called a "modem" (short for modulator/demodulator), anyone can use the telephone lines to called a similarly equipped computer and exchange text files and programs. Hard-core computer users can purchase or obtain from the public domain a program that allows them to receive calls from other computers and let them exchange information via specific message boards; think of it as the neighborhood bulliten board, tacked up on a Safeway wall, only these "shoppers" are browsing through the phone lines. Incoming callers can read messages left by other callers, post their own messages, send "electronic mail" and send and receive software programs. This has created an entire underculture of information junkies.

This isn't just a localized phenomenon; there are now more free BBSs in the United States than newspapers, television stations and radio stations combined; some estimates place the number of BBSs as high as 40,000. Most likely, there are around 11,000 BBSs operating at any one time. Many BBSs publish a list of BBS contact numbers, such as the PAMS List, which contains over 2,000 up-to-date BBS telephone numbers.

Some chose to take an originally noble idea and twist it; no matter the excuses, piracy is theft, pure and simple. It does not seem to stop the thieves, however.

BACKGROUND: COPY PROTECTION

Copy protection has many forms, but comes in two main flavors: Disk Protection and Manual Keyword.

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Until just recently, almost all computer games were copy protected with a disk- based system; the most common is called "check-sum." This is a routine embedded in the game that causes the computer to check various figures, add them up, and then continue with the game, if all is well. By leaving at least one track on a floppy disk unused, the routine knows what the figures should add up to at all times. Copying a disk, however, generally causes all tracks to be used, so a copied "check-sum" protected game would always come up with the wrong sum, and stop the game.

The problem with this form of copy protection is that it's easy to defeat. One commercial disk copy program, Copy II Plus, even provides parameter files for most games and other software packages, although they post notices through the program that these are for "backup" purposes only .

Using Copy II Plus, a novice computer user can guide himself, by using the manual, in copying dozens of commercial software products. A game that may have taken 8 months to program, test, debug and get on the shelves takes about 4 minutes to copy on a home computer.

Manual Keyword copy protection is a system that, at certain points in the game, demands that the player look up a certain word in the game manual and enter it on the keyboard. If he can't, the game stops. This type of copy protection is much preferred by consumers, as it allows a game to be stored on a hard disk, where its more easily and quickly accessed. By creating very large manuals, sometimes 200 pages, the publisher can make it expensive to copy the whole manual and so deters the casual gamer from giving a copy to a friend.

The whole point behind copy protection, designers and publishers say, is to protect a large investment, in time and talent by the designers, and in money by the publishers. Ralph Bosson, of Garde Games and designer of such hits as Blue Powder, Gray Smoke and High Seas, makes the point that good copy protection does what it's supposed to do—keep honest people honest.

"We put out High Seas without protection," Bosson told me, "and the sales just dropped out." While there are other factors—some games are just more popular than others—the clear inference is that copy protection helps prevent piracy.

PIRACY: MOTIVATIONS

"I first started cracking programs in 1980 because a disk died," says "Captain Crackers." "I'd bought this $250 check writing program, 'cause my wife and I thought we needed one. The disk was heavily protected, so I had to use the original. Eventually, the disk went bad... and there I was, stuck. I had no choice but to send the disk back to the manufacturer for a new disk. They charged me $20 for the disk and took two weeks to ship it."

Over the telephone, I heard a snort of utter disgust. "In the meantime, all our bills were on the computer, and we were two week late paying them. THAT made me mad, and that's went I started looking into how to duplicate disks."

Captain Crackers (he no longer cracks software, but prefers to remain unnamed) makes a valid point on the genesis of software piracy; software publishers helped start the trend of piracy and software cracking by charging exorbitant prices and not providing backup disks to their protected programs.

"The companies walked into it face first," he told me, "by trying to gouge the user. They not only didn't have the best interests of their customers at heart, they were charging incredible prices for disks that the user couldn't back up. Who's going to pay $300 for Visi-Calc if they can get it for free?" He noted that he originally bought Visi-Calc for $250, then it saw it on store shelves for $20 two years later. "You think I didn't feel like I was ripped off?" he asked wryly.

"If the companies had first approached the market with an attitude of 'The buyer is honest, let's trust the buyer and provide a good service for him,' they would have made thousands of converts and the piracy issue today would be moot," Crackers continued. "As it was, they came at the consumer with a 'Let's squeeze every last penny we can from each buyer, as fast as we can and when we can,' and that killed them."

The Captain points to the phenomenon of "shareware" to illustrate his point (shareware is software that is put into the public domain by the designer, who asks that a contribution be sent to him if a person uses and likes the program). "There are some people who are making a living on shareware alone," he notes. "People may not send the full asking price, but many send something, even a few dollars. It shows that it can work."

It seems certain that both the consumer and the publisher, at least initially, were at fault for the explosion of casual piracy. While Crackers in no way endorses piracy, it's easy to see how the attitude can be acquired. These days, passing a copy of a new disk to a friend or relative has become so commonplace, no one even thinks of it as stealing anymore.

THE "CASUAL" PIRATE: UNTHINKING THEFT

"One of the problems is the term 'piracy,' Ralph Bosson, game designer, told me. "It glorifies the act of stealing."

Its true; the word piracy brings up exciting visions of Bluebeard and high- masted frigates, scanning up and down the Spanish Main for merchantmen loaded with loot. It is a truly folklorish picture; most people never stop to realize that pirates stole what they got.

"People who wouldn't take a candy bar out of a drug store think nothing of it," Bosson said, referring to the casual pirate. "People have to be reeducated; kids see their teachers and friends do it, their parents don't say anything about it... they grow up thinking its ok. Not right, just ok. We need to

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redefine the act of "piracy," and put the guilt back into it."

Tony Van, in Technical Support for Mediagenics, agrees. "Personally," he says, "I feel most people just don't realize that its wrong, and it hurts the market." Bosson says it most hurts the consumer. "If consumers bought the games they normally get from a friend, we'd (software publishers) have more money to put into research and development and, in turn, produce better quality games." He sighed, "Can you imagine the great games that could be out there now?

The Software Publisher's Association, an industry organization that collects data and also prosecutes software pirates, estimates conservatively that for every piece of software sold, another is pirated. That's a one to one ratio; Ken Williams, founder of Sierra Online, theorizes a 10 to 1 ratio in Stephen Levy's book, Hackers. In an industry that saw over $300 million in sales last year, the lost money becomes significant.

Some say the estimates on the amount of piracy are overblown. "I tend to believe the industry highly overrates the amount of piracy that goes on," says Captain Crackers. "Frankly, they're just over-reacting." Others, like Bosson and Van, feel that a one-to-one ratio is probably conservative.

What these people have to say goes to the core of casual piracy; making a copy of a program and giving it to someone is, basically, a wrong act and yet, who is going to deny a relative or close friend a copy of a game, especially if they live in the same house or town?

BACKGROUND: THE PROFESSIONAL PIRATE

He was working late; his boss at the game software publisher thought it wonderful of him, but he had other motives. Being a temporary employee had it's good points, but pay wasn't one of them.

By 7 pm, everyone else was gone from the office, hitting the Interstate for San Francisco, San Jose or south to the depths of Silicon Valley; now was his time.

Stepping into the test lab, he used his key to open the cabinet that stored beta test disks of the latest games in production at the company. These games were nearly finished, and scheduled to go to Duplication within the week. Removing two disks, he stepped to a IBM compatible clone, switched it on and booted a copy program.

Once the two games were copied, he put the room back in it's original condition and left, the disks in hand. He knew he could sell them to the right people for at least $200 a piece; he would never chance selling single copies to gamers; let the SysOps take that risk.

Their numbers are few, and they trust almost no one, and especially not right off the bat. They cultivate their "professional" relationships very carefully; court the wrong man, say an undercover cop, or a private investigator for a publisher, and it could mean time in jail. They either operate or frequent the "pirate boards," computer BBSs that specialize in providing "crunched" commercial software; this is the place they either sell or acquire illegal copies of commercial games.

These people are the "pros" in the piracy industry; not the home "cracker" who seeks to impress his friends, but the person who illegally obtains a "cracked" copy of a commercial product and sells it, either singly to consumers, or a master copy to another "pro." They represent fewer than one percent of pirates, but they may deal as many as 10% of all pirated products.

"I get most games before they are released in the US," one pirate, "Ajax," told me (Ajax is not his regular handle; he agreed to speak with me only in strictest anonymity. Even then, he had a voice distorter connected to the phone. I felt like I was part of a grade B spy thriller.). Sometimes he gets them from contacts Europe or Asia, where games are often released for sale first; sometimes, he says, he buys unprotected copies from people he believes work for publishers, or are in contact with employees of publishers. "Where else am I going to get a master copy of The Last Ninja?" he asked. "A guy I know contacts me on a local board and offers it to me for $500; of course I'm going to buy it."

It is infrequent for a "pro" to sell to a duplicator who has contacts with a distributor, Ajax told me. "When you read about illegal copies of games being pulled off the shelf, that's the exception, not the rule," he said, noting that most pros sell only single copies for $10 or $15 at local swap meets and flea markets. "I can make five or six hundred dollars on a weekend, and it's virtually impossible to get caught."

Most of his cracked software, over 90% of it, Ajax downloads from pirate bulliten boards from around the country. Operated independently by otherwise honest SysOps, these BBSs are generally open to the calling public, except for the valuable libraries where the cracked games are archived. SysOps and their close friends use such "hidden" libraries to pass cracked programs among themselves, not intending for them to be made available to the general users.

Taking as long as three months to cultivate a good relationship with the pirate SysOp, gaining his trust by uploading one or two choice games, Ajax is eventually granted access to "hidden" libraries where there can be as many as 100 cracked commercial games stored. These he downloads, duplicates at home, and sells at the above-mentioned flea markets and swap meets.

The most distressing thought about pros, especially for designers, is the constant rumors in the industry that beta test versions of games, are occasionally stolen right off a publisher's property and sold to the highest bidder or uploaded to pirate boards.

Recently, a well-known author complained to a professional designer's association that he logged onto a local BBS

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and found an early test version of his latest game. Since he only shipped that copy to the publisher, and it was not distributed to testers, it could only have been obtained from the publisher.

The designer did not want his name published, and refused to divulge the name of the publisher, saying only that it was "one of the big three publishers in the US."

These kind of unattributed and unconfirmed reports pop up all the time in the industry; like heroic myth, there's probably a little bit of truth to them, and a lot of exaggeration. The incident reported above is definitely the exception, not the rule, or publishing houses would be out of business in no time. Even the publishers will admit that it sometimes happens to them... as long as you don't publish their names or their company's.

It is impossible to say just how many copies of cracked games are downloaded from these pirate boards; the point is that these few people deal in bulk, as many as one hundred copies a day on a good weekend. And that's just more money out of the publisher's coffers.

WHAT MOTIVATES THE CASUAL PIRATE?

If you ask a group of 100 frequent game buyers what they really want, 99 of them will tell you the same thing, "I want to be able to put the damn game on my hard drive and have a backup copy!"

From the early days, when cracking a program was the only way to get a quick backup disk to an expensive program, to the present, when casual piracy has become an accepted action among honest people, the same ideal has held true; "I paid for it, I'll make a backup if I want to!" Honest people really do seem to want to be honest; most will accept the concept of copy protection, as long as it does not interfere with copying the product to a hard disk.

Some publishers, like Mindscape and Strategic Simulations, are heeding this clarion call from the users and producing games with strictly manual keyword protection. This allows the consumer to make a trouble free backup copy but, unless a gamer has unlimited access to a Xerox machine, prevents the free distribution of those copies.

THE FUTURE OF GAME PIRACY

It seems unlikely that publishers and law enforcement agencies will be able to significantly dent casual piracy in the near future. To date, no software publisher has made a point of prosecuting those accused of casual piracy, mostly due to cost. "The only time it now pays to sue," notes Ralph Bosson, "is if the piracy is on a large scale and the pirate is taking payment." If large publishers did sue the casual pirate more often, Bosson feels, we might see a change in the frequency of such theft. It seems a logical argument.

Part of the problem may be in the legal definitions; passing a copy of a game to a friend, but not accepting money for it, does not constitute theft on the copier's part, but receiving stolen goods on the other end. And that is far harder to prove in court. It's also costlier to prosecute.

The SPA will take from between 10 and 40 cases of software piracy to court in a year, and that does not even begin to address the problem. We keep coming back to Bosson's statement on reeducation, and making people realize that casual piracy may be something everybody does, but that doesn't make right or moral.

THE BOTTOM LINE

The bottom line is: every copy of a game you hand out to a friend or relative is helping to drive prices of ALL games up. While software publishers don't directly add in the estimated cost of piracy to a new game, they DO estimate how many copies they expect to sell and price accordingly. It's simple mathematics; the more games you can sell, the less you have to charge. One representative of a publisher, off the record, estimated to me that piracy, indirectly, may add $10 to the price of a new game.

Casual piracy will never be eradicated, and some form of copy protection for games will always be with us; it might be interesting for you to remember the next time you give a friend a free copy of a new game, however, that you just drove the price of the next new game up a penny or so.

SIDEBAR: JOHN DRAPER, THE LEGENDARY CAPTAIN CRUNCH

If any one person can be said to personify the image of the software pirate, its John Draper, also known as "Captain Crunch." He was awarded his nickname years ago, when he discovered that a tiny toy whistle, included as a free prize in a box of breakfast cereal, emitted a tone that, when blown into a telephone receiver, would unlock the trunk lines and allow unlimited long distance dialing.

I tried to reach Mr. Draper for an interview, as no article on computer software would be complete without a comment from the inestimable Crunch; unfortunately, I could not. A notice in the Associated Press, however, notes that he just returned for the Soviet Union, where he was part of an American delegation consulting with Soviet computer scientists on telecommunications.

USER GROUP
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Texoma Mac-Apple Club meets on the second and last Saturday of every month at the TU Electric Building at the corner of Ninth and Scott. The meetings begin at 10AM. Meetings are open to all members and newcomers may attend two meetings before paying membership dues. Membership dues are $15 a year. Membership entitles you to the following benefits:

- Monthly newsletter
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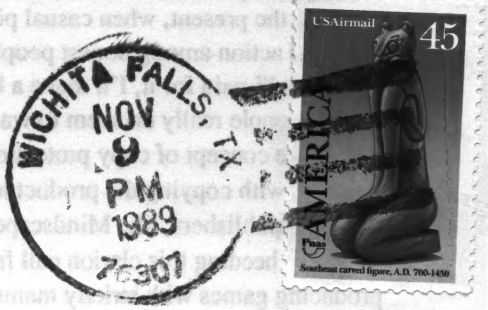

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